WHAT IS CLAIMED IS:

1. A light-emitting semiconductor device comprising:

a substrate;

plural semiconductor layers comprising group III nitride compound semiconductors laminated on the substrate;

an emission layer formed on a first side of the substrate; and

a mirror structure formed on a second side of the substrate opposite the first side,

wherein the mirror structure comprises a light transmission layer having luminous transparency comprising at least one material selected from a group consisting of metal oxides and ceramics, and a metal reflective layer suitable for reflecting light emitted from the emission layer.

2. A light-emitting semiconductor device comprising:

a substrate;

plural semiconductor layers comprising group III nitride compound semiconductors laminated on the substrate;

an emission layer; and

a mirror structure,

wherein the mirror structure comprises a metal reflective layer suitable for reflecting light emitted from the emission layer and a corrosion-resistant layer

comprising at least one material selected from the group consisting of metal oxides and ceramics.

3. A light-emitting device comprising a group III nitride compound semiconductor according to claim 1, further comprising a corrosion-resistant layer which comprises at least one metal oxide or ceramic material formed on an exposed surface of the mirror structure.

4. A light-emitting device using a group III nitride compound semiconductor according to claim 1, wherein the reflective layer is formed by using at least one metal from a group consisting of aluminum (Al), silver (Ag), and their alloys.

5. A light-emitting device using a group III nitride compound semiconductor according to claim 2, wherein the reflective layer is formed by using at least one metal from a group consisting of aluminum (Al), silver (Ag), and their alloys.

6. A light-emitting device using a group III nitride compound semiconductor according to claim 1, wherein the thickness of the reflective layer is in a range of 5nm to 20μm.

7. A light-emitting device using a group III nitride compound semiconductor according to claim 2, wherein the thickness of said reflective layer is in a range of 5nm to 20μm.

8. A light-emitting device using a group III nitride compound semiconductor according to claim 1, wherein said light transmission layer comprises at least one material selected from a group of metal oxides and oxides consisting of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, SnO_2, and ZrO_2.

9. A light-emitting device using a group III nitride compound semiconductor according to claim 2, wherein said light transmission layer comprises at least one material selected from a group of metal oxides and oxides consisting of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, SnO_2, and ZrO_2.

10. A light-emitting device using a group III nitride compound semiconductor according to claim 4, wherein said light transmission layer comprises at least one material selected from a group of metal oxides and oxides consisting

of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, SnO_2, and ZrO_2.

11. A light-emitting device using group III nitride group compound semiconductor according to claim 5, wherein said light transmission layer comprises at least one material selected from a group of metal oxides and oxides consisting of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, SnO_2, and ZrO_2.

12. A light-emitting device using group III nitride group compound semiconductor according to claim 6, wherein said light transmission layer comprises at least one material selected from a group of metal oxides and oxides consisting of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, SnO_2, and ZrO_2.

13. A light-emitting device using group III nitride group compound semiconductor according to claim 7, wherein said light transmission layer comprises at least one material selected from a group of metal oxides and oxides consisting of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, SnO_2, and ZrO_2.

14. A light-emitting device using a group III nitride

compound semiconductor according to claim 1, wherein a thickness of the light transmission layer is in a range of about 5nm to 10μm.

15. A light-emitting device using a group III nitride compound semiconductor according to claim 8, wherein a thickness of the light transmission layer is in a range of about 5nm to 10μm.

16. A light-emitting device using a group III nitride compound semiconductor according to claim 9, wherein a thickness of said light transmission layer is in a range of 5nm to 10μm.

17. A light-emitting device using a group III nitride compound semiconductor according to claim 10, wherein a thickness of the light transmission layer is in a range of about 5nm to 10μm.

18. A light-emitting device using a group III nitride compound semiconductor according to claim 11, wherein a thickness of the light transmission layer is in a range of about 5nm to 10μm.

19. A light-emitting device using a group III nitride compound semiconductor according to claim 12, wherein a thickness of the light transmission layer is in a range of about 5nm to 10μm.

20. A light-emitting device using a group III nitride compound semiconductor according to claim 13, wherein a thickness of the light transmission layer is in a range of about 5nm to 10μm.

21. A light-emitting device using group III nitride group compound semiconductor according to claim 2, wherein the corrosion-resistant layer comprises at least one material selected from a group consisting of Al_2O_3, TiO_2, MgO, $MgCO_3$, Ta_2O_5, ZnO, In_2O_3, SiO_2, ZrO_2, metal carbides, metal nitrides, and metal borides.

22. A light-emitting device using a group III nitride compound semiconductor according to claim 2, wherein a thickness of the corrosion-resisting layer is in a range of about 5nm to 10μm.

23. A light-emitting device using a group III nitride compound semiconductor according to claim 21, wherein a

thickness of the corrosion-resisting layer is in a range of about 5nm to 10μm.

24. A light-emitting device using a group III nitride compound semiconductor according to claim 1, wherein the substrate comprises sapphire and has a thickness in a range of about 75μm to 150μm.

25. A light-emitting device using a group III nitride compound semiconductor according to claim 2, wherein the substrate comprises sapphire and has a thickness in a range of about 75μm to 150μm.

26. A light-emitting device using a group III nitride compound semiconductor according to claim 1, wherein the reflective layer is comprises at least one metal selected from a group consisting of rhodium (Rh), ruthenium (Ru), platinum (Pt), gold (Au), copper (Cu), palladium (Pd), chromium (Cr), nickel (Ni), cobalt (Co), titanium (Ti), indium (In), molybdenum (Mo), and their alloys.

27. A light-emitting device using a group III nitride group compound semiconductor according to claim 2, wherein the reflective layer comprises at least one metal selected

from a group consisting of rhodium (Rh), ruthenium (Ru), platinum (Pt), gold (Au), copper (Cu), palladium (Pd), chromium (Cr), nickel (Ni), cobalt (Co), titanium (Ti), indium (In), molybdenum (Mo), and their alloys.

28. A light-emitting device using a group III nitride group compound semiconductor according to claim 8, wherein the reflective layer comprises at least one metal selected from a group consisting of rhodium (Rh), ruthenium (Ru), platinum (Pt), gold (Au), copper (Cu), palladium (Pd), chromium (Cr), nickel (Ni), cobalt (Co), titanium (Ti), indium (In), molybdenum (Mo), and their alloys.

29. A light-emitting device using a group III nitride group compound semiconductor according to claim 9, wherein the reflective layer comprises at least one metal selected from a group consisting of rhodium (Rh), ruthenium (Ru), platinum (Pt), gold (Au), copper (Cu), palladium (Pd), chromium (Cr), nickel (Ni), cobalt (Co), titanium (Ti), indium (In), molybdenum (Mo), and their alloys.

30. A light-emitting device using a group III nitride compound semiconductor according to claim 1, wherein the reflective layer has a multi-layer structure comprising a plurality of metal layers.

31. A light-emitting device using a group III nitride compound semiconductor according to claim 2, wherein the reflective layer has a multi-layer structure comprising a plurality of metal layers.

32. A method for manufacturing a light-emitting device using a group III nitride compound semiconductor according to claim 1, comprising a process of:

forming a mirror structure,

wherein said process comprises the steps of sequentially forming a light transmission layer, a reflective layer, and a corrosion-resistant layer.

33. A method for manufacturing a light-emitting device using a group III nitride compound semiconductor according to claim 2, comprising a process of:

forming a mirror structure,

wherein said process comprises the steps of sequentially forming a light transmission layer, a reflective layer, and a corrosion-resistant layer.

34. A method for manufacturing a light-emitting device using a group III nitride compound semiconductor according

to claim 32, further comprising a step of:

a breaking process for separating the semiconductor wafer into individual light-emitting devices.

35. A method for manufacturing a light-emitting device using a group III nitride compound semiconductor according to claim 33, further comprising a step of:

a breaking process for separating the semiconductor wafer into individual light-emitting devices.

36. A method for manufacturing a light-emitting device using a group III nitride compound semiconductor according to claim 32, further comprising the steps of:

a process for forming separation grooves for separating the semiconductor wafer into individual light-emitting semiconductor devices by cutting the electrode side of said wafer to a predetermined depth;

a lamellar process comprising grinding or polishing the substrate to a predetermined thickness;

an adhesion process for adhering the semiconductor wafer to an adhesive sheet to expose a surface of the substrate;

a scribing process for scribing split lines into the exposed surface of the substrate for dividing the wafer into individual light-emitting semiconductor devices; and

a process for forming the mirror structure on the exposed surface of the substrate.

37. A method for manufacturing a light-emitting device using a group III nitride compound semiconductor according to claim 33, further comprising the steps of:

a process for forming separation grooves for separating the semiconductor wafer into individual light-emitting semiconductor devices by cutting an electrode side of the wafer to a predetermined depth;

a lamellar process comprising grinding or polishing the substrate to a predetermined thickness;

an adhesion process for adhering the semiconductor wafer to an adhesive sheet to expose a surface of the substrate;

a scribing process for scribing split lines on the exposed surface of the substrate dividing the wafer into individual light-emitting semiconductor devices; and

a process for forming the mirror structure.